

Observation During the 1959 and 1960 Epidemic of the  
Southern Pine Beetle Infestation

By: A. E. Green

General Remarks

This report is a continuation of observations from the year 1958, when the epidemic seemed to die out in October. A report for that year was transmitted on June 30, 1959 to members of the Texas Forest Pest Committee.

In May 1959, the outbreak of the beetle again became serious. The infestation spread to the Devers and Strain Switch area in Hardin and Liberty Counties and North of the Kountze-Saratoga Highway to the Honey Island area. The total area is approximately 200,000 acres in size. Infested spots were found to be larger than the spots occurring in 1958. Several of the spots were allowed to go uncontrolled during the year 1959 and by April 1960 some of these areas had joined. The largest areas became 300 acres in size. The general infestation had spread to Saratoga, Batson and Votaw by June 1960.

In some cases control was delayed one year from time of first detection. This increased the job of control to several times what it would have been if control action had been taken soon after the spots were discovered and reported.

There were several reasons why the small areas became large areas and the beetle infestation reached the epidemic stage. Among them are the following:

- a. Heavy rain at regular intervals throughout the two-year period made some areas inaccessible.
- b. Some cooperators failed to recognize the seriousness of the infestation.
- c. Not enough crews were employed by landowners to control infestations fast enough.
- d. Areas where the February 1960 snow storm broke limbs and tops caused some increase of insect activity.
- e. The infestation spread was greater in areas of recent hardwood and pine logging.

Many cooperators reactivated control work in April 1960 after the soil began to dry out. At this time the infested areas had grown so large and the new spots so numerous that the control by the application of spray became too slow for control work to keep current. A meeting was called at the Texas Forest Service Woodville headquarters to discuss plans on June 10, 1960 for speed up of control. Private cooperators, U. S. Forest Service and Texas Forest Service representatives participated. (See appendix for minutes of the meeting). It was decided to cease spraying of all the felled trees and to salvage merchantable portion of the trees without spraying if utilization was to be soon but to spray tops, stumps or any trees not salvaged which contained larvae, adults or eggs. If there was evidence of lack of broods, spraying was unnecessary. This proved satisfactory, as there was no indication of infestation spread along the routes the products were hauled.

The epidemic began to subside by mid-August 1960. No new spots were observed from the air after the August 16th flight. The decrease in activity was probably due to part or all of the following:

- a. Salvage and control of large spots.
- b. Build up of predators.
- c. Trees picked up in vigor.

New outbreaks were observed in previously uninfested areas in November and December 1960 along REA right-of-way near Saratoga and Votaw as far east as Farm Road 770 and northeast of Honey Island on Farm Road 420. Only pruned or damaged trees, due to right-of-way clearing, were attacked. The infested trees had been severely pruned with limbs left around the base of the pruned trees.

In 1959 and 1960 the epidemic followed almost the same buildup and tapering off pattern as in 1958. The tabulation below shows a breakdown of new spots observed by each flight date.

Tabulation of New Spots Discovered  
From Aerial Observations

1959		1960	
Date of Flight	New Spots Observed	Date of Flight	New Spots Observed
July 6	6	January 21	4
July 14	8	February 26	10
August 5	2	March 23	3
June 10	21	June 7	62
June 22	24	June 21	96
August 18	10	June 28	44
August 28	2	April 27	26
September 14	4	May 31	42
October 7	6	July 5	46
October 27	5	July 12	23
December 17	20	July 19	22
		July 26	25
		August 2	14
		August 16	5
		August 29	0
		September 12	0
		December 21	8
		December 22	5
		December 23	2
Total	108		437

Listed below is the number of locations of each owner showing spots controlled and uncontrolled in 1959 and 1960. The uncontrolled either ceased to be active without control action or expanded to other spots.

Owner	Controlled	Uncontrolled
Anderson Estate	0	5
Angelina County Lbr. Co.	33	0
J. Austin Barnes	0	2
Beech Creek Lbr. Co.	0	1
J. L. Carr	1	0
Champion Paper & Fibre Co.	20	4
Gulf & Texas	1	0
International Paper Co.	41	0
T. M. Jordan	1	0
Keith Company	56	10
Kirby Lumber Corp.	175	0
George Kirkpatrick	3	0
Phillip Lucas	0	3
Marbann Company	20	10
W. L. Minter	1	0
W. D. Myer Estate	0	2
Nona Mills	4	6
Pan-American	1	0
Pickett Estate	0	1
Quinn Estate	0	3
Pete Rackl	0	3
J. B. Rivers	0	1
Southern Pine	3	0
Southwestern SD Co.	86	25
Sum Oil	0	1
Texas Company	0	1
L. L. Williams	6	1
Willis Estate	1	1
Charles Little	1	0
R. Hooks	1	0
Everett Morse	1	0
Bill Smith	1	0
Louis Partlaw	1	0
Joseph Le Fluer	1	0
J. J. Allums	1	0
Walter Moye	1	0
W. T. Miller	1	0
M. L. Barneycastle	1	0
E. Turner	1	0
Ogletree Lumber Co.	1	0
Totals	465	80

Although the Texas Forest Service was prepared to organize control crews, such action was not necessary.

Enforcement of the State Pest Control Law under authority from the Commissioner of Agriculture was not necessary.

#### Detection

##### Air Observation:

The same procedure was used for detection as in 1958. The only change

was the cost per hour of a 172 Cessna plane at \$20.00 per hour. This cost was paid for by the Texas Forest Service. The patrol pattern consumed from one and one half hours to two and one-half hours per flight depending on the number of new spots found. The observers were supplied by Kirby Lumber Corporation, Southwestern Settlement and Development Company, International Paper Company and the Texas Forest Service. The aircraft contractor was changed from F & F Flying Service at Beaumont Municipal Airport to Mike Boyette at Kirbyville. A new grid map with one inch to a mile scale was developed by Marvin Angle, International Paper Company, based on the latest topography map, recent aerial photographs, landowner maps and Texas Forest Service fire control maps. These maps proved to be of considerable help both for aerial and ground work.

The area necessary to cover in observation flights was so large and irregular by the Summer of 1960 that it had to be divided into two parts; the lower area included that area around Devers and Strain Switch and the upper area included to Sour Lake and Votaw.

After each flight a report was prepared using Form FM 14 (See appendix). A copy was sent to each cooperator, Texas Forestry Association, Texas Forest Service, Southern Forest Experiment Station and Regional Office, U. S. Forest Service.

#### Ground Observation or Checking

This operation followed the same procedure as was used in 1958. Texas Forest Service continued to do the ground checking for individuals lacking qualified personnel to do it. In the summer of 1960, two foresters were added to the Texas Forest Service headquarters staff at Woodville to help take care of the heavy workload.

#### Control

The operation of control crews was the same as in 1958. The crews consisted of about the same man power and equipment. The U. S. Forest Service loaned to the Texas Forest Service an Oliver crawler tractor equipped with a Panama type pressure spray. The equipment was used by Southwestern Settlement and Development Company first in the woods where they found it very ineffective due to the difficulty of moving it through logging slash. They found it was satisfactory for spraying areas where small saplings were attacked. Later it was used on a railroad siding where logs were loaded on cars. Here they were able to spray only part of the decked logs because they couldn't be turned after unloading from trucks. The portable hand sprayer is the only satisfactory method found for applying chemicals to infested trees.

#### Personnel Used

At the height of the infestation, detection, control and salvage operations employed 140 persons in categories of work as follows:

1. Air detection	4
2. Supervision and clerical work	5
3. Ground Observers	18
4. Control crews	60
5. Salvage loggers and pulpwood producers	53
Total	<u>140</u>

Cost of Operation

Expenditures by landowners are shown on the tables in the appendix for each year concerned.

Summary

The epidemic in 1959 and 1960 was almost as severe as that in 1950. During these two years a total of 545 spots were observed. The total loss as compiled from information submitted by cooperators was an estimated 200,000 trees, on approximately 2500 acres. The estimated damage was \$375,000.00 plus loss of future growth for these trees. The tabulation below shows the approximate volume lost each year.

	<u>Volume of Timber Killed</u>			<u>Volume Salvaged</u>		
	<u>1959</u>	<u>1960</u>	<u>Total</u>	<u>1959</u>	<u>1960</u>	<u>Total</u>
Sawlogs (M bd. ft.)	2,500	8,000	10,500	1,000	7,000	8,000
Pulpwood (cords)	2,500	8,000	10,500	1,000	5,500	6,500

AEG/et  
4/11/61

#### APPENDIX

1. May 16, 1960 memorandum to landowners on expenditures
2. Minutes of meeting held on June 10, 1960 at Woodville
3. Legal Notice prepared for landowners
4. Revised Form FM - 17
5. Revised Form FM-14, July 1959
6. List of cooperative landowners, contact man and address
7. Expenditures and Refunds for period June 1959-June 1960, incl.
8. Expenditures and Refunds for period June 1959 through November 1959.
9. Statement of Expenditures for period July 1, 1960 through December 31, 1960

TEXAS FOREST SERVICE

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College Station, Texas, May 16, 1960

To: Forest Landowners Controlling Southern Pine Beetle Infestations

From: Head, Forest Management Department, Texas Forest Service *Don Young*

Subject: PRIVATE LANDOWNER EXPENDITURES FOR SOUTHERN PINE BEETLE CONTROL

1. This memorandum replaces one of June 13, 1958 on the same subject. The principal change is in paragraph 6 below.

2. Since June 9, 1958 a cooperative agreement has been effective between the U. S. Forest Service and the Texas Forest Service for control of southern pine beetles in Hardin and Liberty counties. Pest control funds under Public Law 110 are available on a reimbursement basis. Reimbursement is based on the amount of qualifying expenditures made by private landowners and the state of Texas for control of the southern pine beetles.

3. Information from the U. S. Forest Service is to the effect that a signed statement of expenditures by private landowners in the form of a letter will suffice as a basis for reimbursement. The statement should list five items of expenditures as follows:

(a) Supervisors' salary and travel - Included here would be the time and expenses of administrators such as Wallace Smith, Cliff Coffman, Joe Miesch, etc.

(b) Field personnel salary and travel - This would include expenditures of personnel such as Bob Gara, Jake Fuller, Stanley Lindsey, ground checkers, observers, navigators and control crews including OASI and workmens compensation. Cost of telephone and telegraph calls should also be included here.

(c) Cost of equipment and supplies - This item should include expenditures for such items as chemicals, oils, sprayers, gasoline cans, petroleum products for power saws, maps, and postage.

(d) Equipment maintenance and depreciation other than vehicles, such as power saws.

(e) Cost of plane rental for detection.

4. Travel as used in items a. and b. above includes cost of transportation as well as meals and lodging. Probably the best way to figure transportation costs of motor vehicles is operating cost per mile plus depreciation times the number of miles traveled.

5. There needs to be but one sum for each item above. It is unnecessary to list each individual or item involved or separate salary and travel.

6. When salvage operations are carried on as part of the control measures, the reimburseable expenditures would only include cost of supervision to be sure all brood trees are salvaged, cost of chemicals and cost of application of these chemicals to brood trees, time spent in detection, ground checking and designation of brood trees. Logging costs are not considered to be reimburseable.

7. It is requested that a statement by items a. through e. above, be supplied the Texas Forest Service at College Station by the 15th of each month for expenditures, by items, for the previous month. This means that you will be reimbursed in some degree for your expenditures in southern pine beetle control regardless of whether the work is done on your own company's land or on lands of others.

8. It is only with your cooperation in supplying the information requested that Pest Control Act funds will be made available. In other words, evidence is required of expenditures before reimbursement, perhaps as high as 33%, will be made.

9. Precisely how the funds received as reimbursement will be distributed is not definite at this time. Reimbursement will probably be paid to the Texas Forest Service, but it seems only reasonable that the companies and individuals that earned this because of their beetle control activity should share proportionally unless it is agreed that the Texas Forest Service should have first claim on these funds in order to finance control crews required on lands on which the owner is unable or unwilling to do beetle control work.

10. Additional copies of the attached form FM-17 can be obtained from us.

DY/AEG/et  
Attachment

Copy sent to: Marvin G. Angle  
Tom Easley  
I. F. Eldridge  
Jake Fuller  
Art Green  
T. S. Hooks  
Otis W. Jayroe  
Lud King  
Lee Langston  
Fred LeMieux  
Stanley Lindsey  
Phillip Lucas  
Kenneth Nelson  
Pete Racki  
Regional Forester  
Sam Roberts  
Wallace Smith  
George Stanley  
Sam Tate  
R. M. Townsend  
L. L. Williams



MINUTES OF MEETING ON SOUTHERN PINE BEETLE CONTROL  
June 10, 1960, Woodville

1. The meeting was called by the Texas Forest Service to discuss procedure for speeding up control of the Southern Pine Beetle.

2. Those in attendance were: Marvin Angle, Stanley Lindsey, and Dave Campbell of International Paper Company; Sam Roberts representing the Keith Company; Lincoln Skillern, Joe Meisch and Furman Harsdorff of Southwestern Settlement and Development Company; Virgil Holt representing B. E. Quinn Estate; Cliff Coffman and "Cap" Eldredge of Champion Paper; Jake Fuller of Angelina County Lumber Company; Kenneth Nelson of Southern Pine Lumber Company; Wallace Smith and Bob Gara of Kirby Lumber Corporation; Dale Vandenburg, U.S.F.S., Region 8, George Stephenson and Bob Thatcher of Southern Forest Experiment Station, Nacogdoches and Bill Bennett, Southern Forest Experiment Station, New Orleans; Tom Easley representing Nona Mills and others; A. D. Folweiler and Art Green of the Texas Forest Service.

3. Folweiler stated that 161 new, separate infestations or "spots" had been observed from the air since April 27, 1960. 102 of the spots were detected on the flights of May 31 and June 7, 1960. As of June 9, 1960, 150 infestations lacked control; the size of each ranged from five (5) trees to areas as large as 200 acres.

4. Bob Thatcher commented on some of his observations of control work.

a. On some of the spraying equipment, carrying straps were lacking and spray nozzles were missing. He suggested that owners concerned remedy the deficiencies as soon as possible.

b. All spraying should be done thoroughly and according to prescribed procedure if it is to be effective.

5. Dale Vandenburg commented that the purpose of the entire operation, in which his agency is a financial partner, is control of the beetle; salvage is secondary. He emphasized that the control effort should come first and that the technical personnel of each company should be utilized for this purpose.

6. It was agreed that there should be a modification of the woods operations. Salvage will be confined to brood trees of each infestation. When brood trees are salvaged for sawlogs or pulpwood, their tops will be examined carefully, by use of a light axe, for evidence of infestation as larvae, adults, or eggs in the bark or cambium. If they are found, spraying should be done. If evidence of infestation in the tops is lacking, spraying is unnecessary. Examination of the bark and spraying requires close supervision of the men in each crew. When brood trees are salvaged as sawlogs or pulpwood immediately, or within a few days after felling, they don't have to be sprayed. This is based on the assumption that they are going to be utilized promptly. If brood trees of small spots are not salvaged, all bark of the tree should be sprayed.

7. It is fairly generally recognized that at this time of year "sorrell" or "red top" trees seldom contain broods, but nevertheless they should be closely examined. If they can't be salvaged immediately, they should be felled and sprayed. Or to express the same idea another way, there is no use in spraying felled brood trees, except for the tops if they are infested, provided they will be utilized at once.

8. It was recommended that on small sorrel-top spots that no longer contain brood trees, the sorrel-topped trees be felled to facilitate aerial detection of new spots in the same general area.

9. It was suggested that Thatcher determine whether trap tree technique can be used effectively. The work should be done in an area that is readily accessible. With Sam Roberts's concurrence, Tom Easley volunteered Keith Company land located on the Warren road for this purpose.

10. Art Green requested that all reports such as flash reports, job order completion, etc. be returned to him as soon as they are completed so an up-to-date record can be maintained of progress on the project.

11. Folweiler made a plea for more prompt submission of information for partial reimbursement of control costs by companies that submit these reports. The Federal fiscal year will close June 30th. Costs up to and including June, if they have not yet been submitted, should be reported promptly by July 15 to the Texas Forest Service.

AEG;ADF/bc

Copy to: Each participant in meeting  
George Stanley

## NOTICE TO LANDOWNER

The Commissioner of Agriculture and the Texas Forest Service, a part of the Texas A. and M. College System, have entered into an interagency cooperative agreement pursuant to authority of Article 4413 (32), Vernon's Civil Statutes of Texas, whereby employees of the Texas Forest Service are delegated by the Commissioner of Agriculture as his representatives to enforce the provisions of Articles 121 through 125 of the Revised Civil Statutes of Texas, 1925, as amended, as they relate to infected, infested, or diseased trees, shrubs, or plants.

By virtue of the authority stated in the preceding paragraph you are hereby notified that:

1. There is an infestation of Southern Pine beetles on land belonging to you in the \_\_\_\_\_ part of the \_\_\_\_\_ Survey. Approximately \_\_\_\_\_ trees are infested.

2. The Southern Pine beetle is an insect pest that can do a tremendous amount of damage quickly unless checked. There is a description of it in the attached leaflet.

3. To prevent the infestation from becoming a public nuisance, you should destroy or satisfactorily treat all live beetles in infested trees within ten days of the date of this communication. Satisfactory treatment is described in the attached Texas Forest Service Circular #43. The spraying should be done under the direction of the undersigned.

4. Willfull or negligent failure or refusal to comply with this notice within ten days shall, upon conviction, subject you to a fine of not less than twenty-five dollars (\$25.00) nor more than two hundred dollars (\$200.00). Each day your premises are kept in a condition of non-compliance with this notice shall be deemed a separate offense.

5. The undersigned, ten days after the date of this notice is delivered, has the power of entry on your property to treat or destroy the Southern Pine beetles causing the infestation. As owner or person in charge of the infested property, you are liable for cost of treatment. It is a legal claim against you and may be recovered by suit, together with all court costs.

TEXAS FOREST SERVICE

By \_\_\_\_\_  
Name

Title \_\_\_\_\_

Representative of Commissioner  
of Agriculture, State of Texas

Delivered:

\_\_\_\_\_  
Date

Texas Forest Service  
REPORT OF SOUTHERN PINE BEETLE CONTROL EXPENDITURES  
(See reverse side for instructions)

Landowner's Name \_\_\_\_\_

- Submitted by: \_\_\_\_\_  
Name of landowner

Signed \_\_\_\_\_

Title

Date \_\_\_\_\_

### Instructions for Preparing Form

1. Salaries & Expenses: Salaries and expenses of foresters and technicians, including observers, navigators and ground checkers, used in the field on the project. Exclude those listed in item 8. Expenses should be the amount of subsistence paid employees.

2. Wages (Labor): Cost of personnel in control crews, etc., mainly semi or non-skilled labor.

3. Transportation: Either a set price per mile multiplied by the miles traveled paid to an employee or the operating cost per mile plus depreciation times the number of miles traveled.

4. Airplane operation and rental: Actual cost of plane rental or cost of operation plus depreciation times hours flown for a cooperator's plane.

5. Small tools and equipment, purchase and repair: Include purchase and repair of such items as sprayers, gasoline cans, power saws, etc.

6. Supplies & Materials, including chemicals: Costs of such items as maps, diesel fuel, petroleum products for power saws.

7. Communications: Self explanatory.

8. Common Services: Pro-rata portion of administrator's salary and travel.

9. Other (enumerate): Enter on here costs of OASI, Workmen's Compensation, unemployment insurance and other costs not included above.

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Submit to:

Director, Texas Forest Service, College Station, Texas, by  
15th of the month following the expenditures.

DY/bw  
6/18/59

FM 14

Revised June 1959

Texas Forest Service

# Southern Pine Beetle Control Status Report

Week ending

Prepared by

or

Owner's Name

2. Names and addresses of owners unwilling or unable to cooperate in control. (List each owner each week who is in this category.)

3. Narrative of highlights of activity by cooperators and project coordinator during reporting period, including opinion of whether the beetle population is increasing, is constant, or is declining.



Owner	Contact Man	Address
Anderson Estate	W. C. Lee	517 Travis Liberty, Texas
Angelina County Lbr. Co.	Art Lehmann	Lufkin, Texas
Champion Paper & Fibre Co.	Lud King	Huntsville, Texas
Thomas Sidney Hooks	T. S. Hooks	Kountze, Texas
International Paper Co.	Marvin Angle	Nacogdoches, Tex.
Kirby Lumber Corp.	George Stanley	Houston, Texas
Keith Company	Sam Roberts	Beaumont, Texas
Lee Langston		
Phillip Lucas	Phillip B. Lucas	Beaumont, Texas 1313 Petroleum Bldg.
Marbann Company	Fred Le Mieux	218 Board of Trade Annex New Orleans, La.
Quinn Estate	Mr. Aiken	226 First Fed. Bldg. Beaumont, Tex.
Pete Rackl	Pete Rackl	Rye, Texas
Southern Pine Lbr. Co.	Kenneth Nelson	Diboll, Texas
Southwestern Settlement & Dev. Co.	R. M. Townsend	Jasper, Texas
L. L. Williams	L. L. Williams	Beaumont, Texas
T. M. Jordan	T. M. Jordan	Kountze, Texas
W. L. Minter	W. L. Minter	Beaumont, Texas
Myers Estate	C. B. Lyon	Box 1005, Houston
Pan American	Jess Knowles	Pioneer Bldg. Lake Charles, La.
J. B. Rivers	J. B. Rivers	2435 Albans Rd., Houston, Texas
Gulf & Texas Co.	Lance Rossier	Saratoga, Texas
Noma Mills	W. C. Gilbert	Beaumont, Texas
B. H. Willis	Jim Dunnigan	Nome, Texas
J. L. Carr	Mrs. J. L. Carr	2051 Colquitt Houston, Texas
Sun Oil Co.	R. R. Murphy	Locker Drawer 2831, Beaumont
J. Austin Barnes	J. Austin Barnes	2135 Calder, Beaumont, Texas
Beech Creek Lbr. Co.	Allan Coats	Warren, Texas
George Kirkpatrick	George Kirkpatrick	207 F & M Bldg Beaumont, Texas
Texas Company	Lance Rossier	Saratoga, Texas
Pickett Estate	E. B. Pickett, Jr.	Liberty, Texas
Charles Little	Charles Little	2125 Calder, Beaumont, Texas
R. Hooks	Robert Hooks Abstract Co.	Kountze, Texas
Everett Morse		Saratoga, Texas
Bill Smith		Thickett, Texas
Louis Partlaw		Daisetta, Texas
Joseph Le Fluer		807 Rosedale Houston, Texas
Walter Moye		Thickett, Texas
W. T. Miller		8218 Woodlyn, Houston, Texas
M. L. Barneycastle		Midland, Texas
E. Turner	Mrs. E. Turner	Liberty, Texas
Ogletree Lbr. Co.	Ben Ogletree	Livingston, Tex.
J. J. Allums	Don Allums	Kountze, Texas

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Expenditures and Refunds Made to Cooperators  
For period June 1959-June, 1960, Inc.

Cooperators	June 1959		July-May		June 1960	June 1960	Grand	Grand
	Expendi- tures	21.73% Refund	Expendi- tures	33-1/3% Refund	Expendi- ture	Refund 20.383%	Total Expendi- tures	Total Refunds
Angelina Co. Lbr. Co.	\$ 270.50	\$ 58.84	\$ 803.51	\$ 267.84	\$ 743.45	\$ 151.54	\$ 1,817.46	\$ 478.22
Champion Paper & Fibre Co.	237.51	51.67	2,110.57	703.52	512.08	104.37	2,860.16	859.56
Grayburg Timber Co.*	105.20	22.92					105.20	22.92
International Paper Co.	116.89	25.46	6,108.62	2,036.20	2,933.58	597.95	9,159.09	2,659.61
The Keith Co.			2,293.36	764.45	2,688.00	547.89	4,981.36	1,312.34
Kirby Lumber Corp.	3,526.39	766.35	14,607.53	4,869.18	6,111.17	1,245.63	24,245.09	6,881.16
Marbann Corp.*			703.60	234.53	544.22	110.92	1,247.82	345.45
B. E. Quinn Estate			110.00	36.67			110.00	36.67
Southern Pine Lumber Co.			319.25	106.42	401.90	81.91	721.15	188.33
Southwestern Settlement & Dev.	1,861.56	404.58	13,938.04	4,646.01	12,109.87	2,468.35	27,909.47	7,518.94
L. L. Williams	73.25	15.92	86.00	28.67			159.25	44.59
Sub-total	6,191.30	1,345.74	41,080.48	13,693.49	26,044.27	5,308.56	73,316.05	20,347.79
Texas Forest Service	594.58	129.26	3,864.04	1,288.01	1,030.13	209.94	5,488.75	1,627.21
GRAND TOTAL	\$ 6,785.88	\$1,475.00	\$44,944.52	\$14,981.50	\$27,074.40	\$5,518.50	\$78,804.80	\$21,975.00

\*Combined these two and make check payable to Marbann Corp.

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Expenditures and Refunds Made to Cooperators  
June Through November 1959

<u>Participant</u>	<u>June</u> <u>Expenditures</u>	<u>21.73%</u> <u>Refund</u>	<u>July-Nov.</u> <u>Expenditures</u>	<u>33-1/3%</u> <u>Refund</u>	<u>Grand Total</u> <u>Expenditures</u>	<u>Grand Total</u> <u>Refunds</u>
Angelina Co. Lbr. Co.	\$ 270.50	\$ 58.84	\$ 268.11	\$ 89.37	\$ 538.61	\$ 148.21
Champion Paper & Fibre Co.	237.51	51.67	322.56	107.52	560.07	159.19
Grayburg Timber Co.	105.20	22.92	-----	-----	105.20	22.92
International Paper Co.	116.89	25.46	5706.79	1902.26	5823.68	1927.72
Kirby Lumber Corp.	3526.29	766.35	2519.93	839.98	6046.32	1606.33
Southwestern Settlement & Dev. Co.	1861.56	404.58	6813.74	2271.24	8675.30	2675.82
L. L. Williams	73.25	15.92	86.00	28.67	159.25	44.59
The Keith Co.	-----	-----	742.20	247.40	742.20	247.40
B. E. Quinn Estate	-----	-----	110.00	36.66	110.00	36.66
Southern Pine Lbr. Co.	-----	-----	319.25	106.42	319.25	106.42
Texas Forest Service	\$ <u>594.58</u>	\$ <u>129.26</u>	\$ <u>1792.42</u>	\$ <u>597.47</u>	\$ <u>2387.00</u>	\$ <u>726.73</u>
	\$ 6,785.88	\$1,475.00	\$ 18,681.00	\$6,226.99	\$25,466.88	\$7,701.99

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1/12/60

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Statement of Expenditures

Southern Pine Beetle Project  
For Period July 1, 1959-December 31, 1960

Angelina County Lumber Co.	\$ 778.70
Carr Lawrence	35.00
Champion Paper & Fibre Co.	3,389.15
International Paper Co.	5,073.91
Keith Company	5,355.10
Kirby Lumber Corp.	895.29
Kirkpatrick, George P.	416.72
Marbann Corp.	6,560.26
Nona Mills Co.	600.00
Racki Lumber Company	609.77
Southern Pine Lumber Co.	261.80
Southwestern Settlement & Dev. Co.	6,050.18
Williams, L. L.	<u>652.09</u>
 Texas Forest Service	 1,098.91
 Total	 \$31,776.88

DY/fa  
March 20, 1961